

RAW SEQUENCE LISTING

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) no errors detected.

Application Serial Number: 09/769,744D
Source: IFw16
Date Processed by STIC: 9/23/05

ENTERED

CRF ERRORS EDITED BY THE SUIC SYSTEMS

TRANSCRIBED

Serial Number: 176924402 CRF Edit Date: 9/23/03
Edited by:

Realigned nucleic acid/amino acid numbers/text in cases where the sequence text "wrapped" to the next line.

Corrected the SEQ ID NO. Sequence numbers edited were:

Inserted or corrected a nucleic number at the end of a nucleic line. SEQ ID NO's edited:

Deleted: invalid beginning/end-of-file text ; page numbers

Inserted mandatory headings/numeric identifiers, specifically:

Moved responses to same line as heading/numeric identifier, specifically:

Other:

Deleted alphabetical headings on <1207, <1307, <1407,
and <1417 lines



IFW16

RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/769,744D

DATE: 09/23/2005
TIME: 14:58:35

Input Set : N:\AMC\769744.txt
Output Set: N:\CRF4\09232005\I769744D.raw

3 <110> APPLICANT: Microbial Technics Limited
 4 Le Page, Richard WF
 5 Wells, Jeremy M
 6 Hanniffy, Sean B
 7 Hansbro, Philip M
 9 <120> TITLE OF INVENTION: Proteins
 11 <130> FILE REFERENCE: PWC/P21122WO
 13 <140> CURRENT APPLICATION NUMBER: US/09/769,744D
 C--> 14 <141> CURRENT FILING DATE: 2001-01-26 *P. 6*
 16 <150> PRIOR APPLICATION NUMBER: PCT/GB99/02452
 17 <151> PRIOR FILING DATE: 1999-07-27
 19 <150> PRIOR APPLICATION NUMBER: GB 9816336.3
 20 <151> PRIOR FILING DATE: 1998-07-27
 22 <150> PRIOR APPLICATION NUMBER: US 60/125329
 23 <151> PRIOR FILING DATE: 1999-03-19
 25 <160> NUMBER OF SEQ ID NOS: 196
 27 <170> SOFTWARE: PatentIn Ver. 2.1
 29 <210> SEQ ID NO: 1
 30 <211> LENGTH: 1200
 31 <212> TYPE: DNA
 32 <213> ORGANISM: Streptococcus pneumoniae
 34 <400> SEQUENCE: 1
 35 atgagaaaata tgtgggttgt aatcaaggaa acctatctc gacatgtcga gtcatggagt 60
 36 ttcttcttta tggtgatttc gccgttcctc ttttaggaa tctctgttagg aattgggcat 120
 37 ctccaagggtt cttctatggc taaaaataat aaagtggcag tagtgacaac agtgcacatct 180
 38 gtagcagaag gactgaagaa tgtaaatggt gttaacttcg actataaaaga cgaagcaagt 240
 39 gccaaagaag caattaaaga agaaaaattt aaaggttatt tgaccattga tcaagaagat 300
 40 agtgttctaa aggcaattta tcatggcgaacatcgctt aaaaatggat taaatttgag 360
 41 gttacaggtt cactcaatga actgcaaaat cagctaattc gttcaactgc ttccttgc 420
 42 caagagcagg aaaaacgctt agcgcagaca attcaattca cagaaaaagat tgatgaagcc 480
 43 aaggaaaata aaaagtttat tcaaacaatt gcagcagggtt ccttaggatt ctttctttat 540
 44 atgattctga ttacatatgc ggggtgttaca gctcaggaaat ttgcccagtga aaaaggcacc 600
 45 aaaattatgg aagtcttttt ttcttagcata agggcaagtc actatttcta tgcgcggatg 660
 46 atggctctgt ttcttagt gtttacgcattt atggatct atgttgttagg tggctctggct 720
 47 gccgtttgc tctttaaaga ttgcatttgc ttggctcagt ctggattttt ggatcacttg 780
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 49 gtcttggcag ctttcctagg atctatgggt tctcgctctg aggactcagg gaaagccttg 900
 50 tcgccttga tgatttgtat tatgggtgggt tttttggag tgacagctt aggtgcagct 960
 51 ggtgacaatc tccctctgaa gattggttct tatattccct ttatccgac cttctttatg 1020
 52 ccgtttcgaa cgattaatga ctatgcgggg ggagcagaag catggatttc acttgctatt 1080
 53 acagtgattt ttgcgggtt agcaacagga tttatcgac gcatgtatgc tagtctcggtt 1140
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 57 <210> SEQ ID NO: 2

RAW SEQUENCE LISTING
 PATENT APPLICATION: US/09/769,744D

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Input Set : N:\AMC\769744.txt
 Output Set: N:\CRF4\09232005\I769744D.raw

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58 <211> LENGTH: 399
59 <212> TYPE: PRT
60 <213> ORGANISM: Streptococcus pneumoniae
62 <400> SEQUENCE: 2
63 Met Arg Asn Met Trp Val Val Ile Lys Glu Thr Tyr Leu Arg His Val
64 1 5 10 15
66 Glu Ser Trp Ser Phe Phe Met Val Ile Ser Pro Phe Leu Phe Leu
67 20 25 30
69 Gly Ile Ser Val Gly Ile Gly His Leu Gln Gly Ser Ser Met Ala Lys
70 35 40 45
72 Asn Asn Lys Val Ala Val Val Thr Thr Val Pro Ser Val Ala Glu Gly
73 50 55 60
75 Leu Lys Asn Val Asn Gly Val Asn Phe Asp Tyr Lys Asp Glu Ala Ser
76 65 70 75 80
78 Ala Lys Glu Ala Ile Lys Glu Glu Lys Leu Lys Gly Tyr Leu Thr Ile
79 85 90 95
81 Asp Gln Glu Asp Ser Val Leu Lys Ala Val Tyr His Gly Glu Thr Ser
82 100 105 110
84 Leu Glu Asn Gly Ile Lys Phe Glu Val Thr Gly Thr Leu Asn Glu Leu
85 115 120 125
87 Gln Asn Gln Leu Asn Arg Ser Thr Ala Ser Leu Ser Gln Glu Gln Glu
88 130 135 140
90 Lys Arg Leu Ala Gln Thr Ile Gln Phe Thr Glu Lys Ile Asp Glu Ala
91 145 150 155 160
93 Lys Glu Asn Lys Lys Phe Ile Gln Thr Ile Ala Ala Gly Ala Leu Gly
94 165 170 175
96 Phe Phe Leu Tyr Met Ile Leu Ile Thr Tyr Ala Gly Val Thr Ala Gln
97 180 185 190
99 Glu Val Ala Ser Glu Lys Gly Thr Lys Ile Met Glu Val Val Phe Ser
100 195 200 205
102 Ser Ile Arg Ala Ser His Tyr Phe Tyr Ala Arg Met Met Ala Leu Phe
103 210 215 220
105 Leu Val Ile Leu Thr His Ile Gly Ile Tyr Val Val Gly Gly Leu Ala
106 225 230 235 240
108 Ala Val Leu Leu Phe Lys Asp Leu Pro Phe Leu Ala Gln Ser Gly Ile
109 245 250 255
111 Leu Asp His Leu Gly Asp Ala Ile Ser Leu Asn Thr Leu Leu Phe Ile
112 260 265 270
114 Leu Ile Ser Leu Phe Met Tyr Val Val Leu Ala Ala Phe Leu Gly Ser
115 275 280 285
117 Met Val Ser Arg Pro Glu Asp Ser Gly Lys Ala Leu Ser Pro Leu Met
118 290 295 300
120 Ile Leu Ile Met Gly Gly Phe Phe Gly Val Thr Ala Leu Gly Ala Ala
121 305 310 315 320
123 Gly Asp Asn Leu Leu Leu Lys Ile Gly Ser Tyr Ile Pro Phe Ile Ser
124 325 330 335
126 Thr Phe Phe Met Pro Phe Arg Thr Ile Asn Asp Tyr Ala Gly Gly Ala
127 340 345 350
129 Glu Ala Trp Ile Ser Leu Ala Ile Thr Val Ile Phe Ala Val Val Ala

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DATE: 09/23/2005
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Input Set : N:\AMC\769744.txt
Output Set: N:\CRF4\09232005\I769744D.raw

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130      355          360          365
132 Thr Gly Phe Ile Gly Arg Met Tyr Ala Ser Leu Val Leu Gln Thr Asp
133      370          375          380
135 Asp Leu Gly Ile Trp Lys Thr Phe Lys Arg Ala Leu Ser Tyr Lys
136 385          390          395

140 <210> SEQ ID NO: 3
141 <211> LENGTH: 1125
142 <212> TYPE: DNA
143 <213> ORGANISM: Streptococcus pneumoniae
145 <400> SEQUENCE: 3
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147 gtgactcaaa atgttggaaag tcttctcgta tccattgtaa tcagtgcata caatgaagaa 120
148 aaatatctgc ctggctaat tgaagactta aaaaatcaa cctatcccaa agaggatatt 180
149 gaaattctat ttataaatgc tatgtccaca gatgggacca cagctatcat tcagcaattt 240
150 ataaaggaag atacagagtt taactcaatt agattgtata acaatcccaa gaaaatcaa 300
151 gctagtgggtt ttaacctggg agttaaacat tctgttaggg accttattt aaaaattgtat 360
152 gctcattcaa aagttactga gactttgtt atgaacaatg tggctattat tcaacaaggt 420
153 gaatttgtct gtggggggcc tagaccgacg attgtcgaag gaaaaggaaa atgggcagag 480
154 accttgcatc ttgttggagga aaatatgttt ggcagtagca ttgccaatta tcgaaatagt 540
155 tctgaggata gatatgtttc ttctattttt catggaatgt ataaacgaga ggtttccag 600
156 aagggtgggt tagtaaatga gcaacttggc cgaactgaag ataatgatat tcattataga 660
157 attcgagaat atggttataa aatccgctat agcccaagta ttctatctta tcagtatatt 720
158 cgaccaacat tcaagaaaaat gtcgcataa aagtattcaa atggttgtg gattggcttg 780
159 acaagtcatg ttcaagttaa gtgttatca ttatttcact atgttccttg tttatttgg 840
160 ttgagtcttg tggttagtct agcattgtt ccgatcacat tcgtattcat aactttacta 900
161 ttaggtgcctt attttctact tttgtcatta ctcacttgc tgactttattt aaaaacataaa 960
162 aatggatttc taatttgtat gccctttatt ttatttcca ttcaacttgc ttatggcctt 1020
163 gggacgattt taggtttaat tagaggattt aaatggaaaga aggagtacaa gagaacaata 1080
164 atttatttgg ataaaataaag ccaaataaat caaaatatgc tataa 1125
167 <210> SEQ ID NO: 4
168 <211> LENGTH: 374
169 <212> TYPE: PRT
170 <213> ORGANISM: Streptococcus pneumoniae
172 <400> SEQUENCE: 4
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174     1           5           10          15
176 Arg Arg Val Val Val Thr Gln Asn Val Glu Ser Leu Leu Val Ser Ile
177     20          25          30
179 Val Ile Ser Ala Tyr Asn Glu Glu Lys Tyr Leu Pro Gly Leu Ile Glu
180     35          40          45
182 Asp Leu Lys Asn Gln Thr Tyr Pro Lys Glu Asp Ile Glu Ile Leu Phe
183     50          55          60
185 Ile Asn Ala Met Ser Thr Asp Gly Thr Thr Ala Ile Ile Gln Gln Phe
186     65          70          75          80
188 Ile Lys Glu Asp Thr Glu Phe Asn Ser Ile Arg Leu Tyr Asn Asn Pro
189     85          90          95
191 Lys Lys Asn Gln Ala Ser Gly Phe Asn Leu Gly Val Lys His Ser Val
192     100         105         110
194 Gly Asp Leu Ile Leu Lys Ile Asp Ala His Ser Lys Val Thr Glu Thr

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RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/769,744D

DATE: 09/23/2005
TIME: 14:58:35

Input Set : N:\AMC\769744.txt
Output Set: N:\CRF4\09232005\I769744D.raw

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195      115          120          125
197 Phe Val Met Asn Asn Val Ala Ile Ile Gln Gln Gly Glu Phe Val Cys
198      130          135          140
200 Gly Gly Pro Arg Pro Thr Ile Val Glu Gly Lys Gly Lys Trp Ala Glu
201 145          150          155          160
203 Thr Leu His Leu Val Glu Glu Asn Met Phe Gly Ser Ser Ile Ala Asn
204          165          170          175
206 Tyr Arg Asn Ser Ser Glu Asp Arg Tyr Val Ser Ser Ile Phe His Gly
207          180          185          190
209 Met Tyr Lys Arg Glu Val Phe Gln Lys Val Gly Leu Val Asn Glu Gln
210          195          200          205
212 Leu Gly Arg Thr Glu Asp Asn Asp Ile His Tyr Arg Ile Arg Glu Tyr
213          210          215          220
215 Gly Tyr Lys Ile Arg Tyr Ser Pro Ser Ile Leu Ser Tyr Gln Tyr Ile
216 225          230          235          240
218 Arg Pro Thr Phe Lys Lys Met Leu His Gln Lys Tyr Ser Asn Gly Leu
219          245          250          255
221 Trp Ile Gly Leu Thr Ser His Val Gln Phe Lys Cys Leu Ser Leu Phe
222          260          265          270
224 His Tyr Val Pro Cys Leu Phe Val Leu Ser Leu Val Phe Ser Leu Ala
225          275          280          285
227 Leu Leu Pro Ile Thr Phe Val Phe Ile Thr Leu Leu Leu Gly Ala Tyr
228          290          295          300
230 Phe Leu Leu Leu Ser Leu Leu Thr Leu Leu Thr Leu Leu Lys His Lys
231 305          310          315          320
233 Asn Gly Phe Leu Ile Val Met Pro Phe Ile Leu Phe Ser Ile His Phe
234          325          330          335
236 Ala Tyr Gly Leu Gly Thr Ile Val Gly Leu Ile Arg Gly Phe Lys Trp
237          340          345          350
239 Lys Lys Glu Tyr Lys Arg Thr Ile Ile Tyr Leu Asp Lys Ile Ser Gln
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242 Ile Asn Gln Asn Met Leu
243          370
247 <210> SEQ ID NO: 5
248 <211> LENGTH: 696
249 <212> TYPE: DNA
250 <213> ORGANISM: Streptococcus pneumoniae
252 <400> SEQUENCE: 5
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254 aaacgcgaagc taatgatttt aatagtggca ctttgacag gtgcgggggc ttttgcatat 120
255 agcactttta ttgttaagcc aqaatatacg agtaccacgc gaatttacgt agtgaatcgc 180
256 aatcaaggag acaagccggg gttgacaaat caggatttgc aggccaggaac ttatctggta 240
257 aaagacttacc gtgagattat ccttcgcag gatgtttgg aggaagtgt ttctgattt 300
258 aaactagatt tgacccaaaa aggtttggct aataaaaatta aagtgacagt accagttgat 360
259 acccgatttg tctctatttc agttaatgat cgagttcctg aagaggcaag ccgtatcgct 420
260 aactcttga gagaagttagc tgctaaaaaa attatcagta ttactcgtgt ttctgacgtg 480
261 acaaacttgg aggaggcaag gccggcgata tccccgtt cgcacatat taaacgcaat 540
262 acactaattt gtttttggc aggggtgatt ggaacttagt ttatagttct tcattttgaa 600
263 cttttggata ctctgtgaa acgtccggaa gatatcgaaa atacatttgc gatgacactt 660

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RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/769,744D

DATE: 09/23/2005
TIME: 14:58:35

Input Set : N:\AMC\769744.txt
Output Set: N:\CRF4\09232005\I769744D.raw

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267 <210> SEQ ID NO: 6
268 <211> LENGTH: 231
269 <212> TYPE: PRT
270 <213> ORGANISM: Streptococcus pneumoniae
272 <400> SEQUENCE: 6
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274 1 5 10 15
276 Lys Ser Leu Trp Lys Arg Lys Leu Met Ile Leu Ile Val Ala Leu Val
277 20 25 30
279 Thr Gly Ala Gly Ala Phe Ala Tyr Ser Thr Phe Ile Val Lys Pro Glu
280 35 40 45
282 Tyr Thr Ser Thr Thr Arg Ile Tyr Val Val Asn Arg Asn Gln Gly Asp
283 50 55 60
285 Lys Pro Gly Leu Thr Asn Gln Asp Leu Gln Ala Gly Thr Tyr Leu Val
286 65 70 75 80
288 Lys Asp Tyr Arg Glu Ile Ile Leu Ser Gln Asp Val Leu Glu Glu Val
289 85 90 95
291 Val Ser Asp Leu Lys Leu Asp Leu Thr Pro Lys Gly Leu Ala Asn Lys
292 100 105 110
294 Ile Lys Val Thr Val Pro Val Asp Thr Arg Ile Val Ser Ile Ser Val
295 115 120 125
297 Asn Asp Arg Val Pro Glu Glu Ala Ser Arg Ile Ala Asn Ser Leu Arg
298 130 135 140
300 Glu Val Ala Ala Gln Lys Ile Ile Ser Ile Thr Arg Val Ser Asp Val
301 145 150 155 160
303 Thr Thr Leu Glu Glu Ala Arg Pro Ala Ile Ser Pro Ser Ser Pro Asn
304 165 170 175
306 Ile Lys Arg Asn Thr Leu Ile Gly Phe Leu Ala Gly Val Ile Gly Thr
307 180 185 190
309 Ser Val Ile Val Leu His Leu Glu Leu Leu Asp Thr Arg Val Lys Arg
310 195 200 205
312 Pro Glu Asp Ile Glu Asn Thr Leu Gln Met Thr Leu Leu Gly Val Val
313 210 215 220
315 Pro Asn Leu Gly Lys Leu Lys
316 225 230
320 <210> SEQ ID NO: 7
321 <211> LENGTH: 555
322 <212> TYPE: DNA
323 <213> ORGANISM: Streptococcus pneumoniae
325 <400> SEQUENCE: 7
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327 gtagatgtct tgcgtcgagc caatatcaca tgtgatatgg ttggtttga agagcaagta 120
328 acgggttcgc atgcaatcca agtaagagca gatcatgtct ttgatggaga tttatcagac 180
329 tatgatatga ttgttctcc tggaggatgt cctggttctg cacattacg tgataatcag 240
330 accttgattc aagaattgca aagcttcgag caagaaggga agaaaactagc agccatttgt 300
331 gccggcaccaa ttgccctcaa tcaagcagag atattgaaaa ataagcgata cacttgttat 360
332 gacggcgttc aagagcaaat cttgtatgtt cactacgtca aggaaacagt agtggtagat 420
333 ggtcagttga caaccagtcg gggccttca acagcccttg cctttgccta cgagttggtg 480

RAW SEQUENCE LISTING ERROR SUMMARY DATE: 09/23/2005
PATENT APPLICATION: US/09/769,744D TIME: 14:58:36

Input Set : N:\AMC\769744.txt
Output Set: N:\CRF4\09232005\I769744D.raw

Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:182; Xaa Pos. 3

VERIFICATION SUMMARY

PATENT APPLICATION: US/09/769,744D

DATE: 09/23/2005

TIME: 14:58:36

Input Set : N:\AMC\769744.txt

Output Set: N:\CRF4\09232005\I769744D.raw

L:14 M:271 C: Current Filing Date differs, Replaced Current Filing Date

L:9148 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:182 after pos.:0

Raw Sequence Listing before editing (for reference only)



IFW16

RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/769,744D

DATE: 09/23/2005
TIME: 14:55:05

Input Set : N:\AMC\769744.txt
Output Set: N:\CRF4\09232005\I769744D.raw

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3 <110> APPLICANT: Microbial Technics Limited
4     Le Page, Richard WF
5     Wells, Jeremy M
6     Hanniffy, Sean B
7     Hansbro, Philip M
9 <120> TITLE OF INVENTION: Proteins
11 <130> FILE REFERENCE: PWC/P21122WO
13 <140> CURRENT APPLICATION NUMBER: US/09/769,744D
C--> 14 <141> CURRENT FILING DATE: 2001-01-26
16 <150> PRIOR APPLICATION NUMBER: PCT/GB99/02452
17 <151> PRIOR FILING DATE: 1999-07-27
19 <150> PRIOR APPLICATION NUMBER: GB 9816336.3
20 <151> PRIOR FILING DATE: 1998-07-27
22 <150> PRIOR APPLICATION NUMBER: US 60/125329
23 <151> PRIOR FILING DATE: 1999-03-19
25 <160> NUMBER OF SEQ ID NOS: 196
27 <170> SOFTWARE: PatentIn Ver. 2.1

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*Does Not Comply
Corrected Diskette Needed*

All p.2

ERRORED SEQUENCES

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9317 <210> SEQ ID NO: 196
9318 <211> LENGTH: 11
9319 <212> TYPE: PRT
9320 <213> ORGANISM: Streptococcus pneumoniae
9322 <400> SEQUENCE: 196
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9324   1           5           10
E--> 9330 163

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09/769,744

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SEQUENCE LISTING

<110> Microbial Technics Limited
Le Page, Richard WF
Wells, Jeremy M
Hanniffy, Sean B
Hansbro, Philip M

<120> ~~TITLE OF INVENTION~~ Proteins

<130> ~~FILE REFERENCE~~ PWC/P21122WO

<140> ~~CURRENT APPLICATION NUMBER~~ US/09/769,744

<141> ~~CURRENT FILING DATE~~ 2001-02-2662785

delete alphabetical headers

VERIFICATION SUMMARY

PATENT APPLICATION: US/09/769,744D

DATE: 09/23/2005

TIME: 14:55:07

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Output Set: N:\CRF4\09232005\I769744D.raw

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L:9148 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:182 after pos.:0

L:9330 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:196